

XXXVII. ROBBERTSON OIL FIELD, GARVIN COUNTY, OKLAHOMA

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From the Oklahoma Geological Survey.

Location

The Robberson oil field is located in the southwestern part of Garvin County, Oklahoma, near the postoffice of Robberson, in T. 1N., R. 3W. It is ten miles northwest of the old rocks of the Arbuckle uplift. The field is the only one of importance in the territory which flanks the Arbuckle uplift on the north and northwest, while the territory to the west, southwest, and south is productive in the Fox, Loco, Wheeler, Healdton, and Hewitt fields.

Discovery Well and Subsequent Development

The first well was drilled in June 9, 1920 in sec. 16, by the Magnolia Petroleum Company and made 40 million cubic feet of gas. Since then a score of gas wells with a total capacity of over 350 million cubic feet have been drilled and over a thousand barrels of oil are being produced daily from twelve wells.

The field has been extended, covering in addition to sec. 16, portions of secs. 9, 10, 11, 13, 14, 15, and 17. The gas is very dry and the oil is of low gravity, averaging 24° Baumé.

Surface Geology and Structure

The surface rocks of the Robberson field are of Permian age, consisting of buff shales and mottled gray and red sandstones, grading towards conglomerates. In places these conglomerates are arkosic. Much float, quartzitic material is present. These formations in a general way, can be traced to the Duncan field and form the surface rock there.

The nature of the surface rock is such that structural work is accomplished with great difficulty. However, geologists have been in the area since 1917 and more or less satisfactory results have been obtained. The major structural features in the producing field are a dome in sec. 16 and an anticline in secs. 24 and 13 and extending northward. Gas is found in the west structure and oil low on the flank of the east structure; its apex is being tested at the present time.

Character of the Producing Sands

Production is being obtained from various depths indicating numerous lenticular reservoirs. Two fairly constant producing oil horizons and a gas sand can be traced. All are of the Permian age. These sands are found at 1,120 feet, 1,240 feet and 1,400 feet. The character of the producing sands varies erratically from fine sandstones to loose coarse sands containing arkose material as large as peas. This is the first production known to come from arkose in Oklahoma.

Probably Undeveloped Territory

The present limits of the field are not definitely set on the west nor the east and it is probable that extension will be made in both directions. Secs. 13, 24, and perhaps 11 and 12 should prove productive. Additional pools may be opened in sec. 8, T. 1N., R. 2W., and sec. 24, T. 2N., R. 3W., where separate structures have been mapped.